

Appendix A

When compiling by using F5, the cube was visible; when rendering by using F6, the cube disappeared and only the Yin/Yang directions were visible in a golden color (see below). The extension of the resulting file was *.scad (the asterisk indicating the open option for a name); Program: [OpenSCAD](#).

```
/*
```

I Ching 3-D Genetic Code Yin/Yang

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Article:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4203674/>

Saved at:

<http://liveweb.archive.org/web/20140715132522/http://omicsgroup.org/journals/file-compression-and-expansion-of-the-genetic-code-by-the-use-of-the-yinyang-directions-to-find-its-sphered-cube-ijbbd.1000112.pdf>

Open Source Code License:

<http://creativecommons.org/licenses/by/4.0/>

```
*/
```

```
%cube(40);
{
    rotate(45)
    color("Red")
    translate([0.7,0,37.5])cube([55, 1, 1], center = false);

    angle=5;
    color("Black")
    multmatrix(m = [ [cos(angle), -sin(angle), 0, 38.5],
                    [sin(angle), cos(angle), 0, 39],
                    [0, 0, 1, 37.5],
```

```

[0, 0, 0, 1]
]) union() {
cylinder(r=1.0,h=1,center=false);
cube(size=[1,1,1],center=false);

}

{

rotate(45)
color("Blue")
translate([28,-28,2.5])cube([1, 55.3, 1], center = false);

angle=5;
color("GreenYellow")
multmatrix(m = [ [sin(angle), -cos(angle), 0, 1.5],
[cos(angle), sin(angle), 0, 39],
[0, 0, 1, 2.5],
[0, 0, 0, 1]
]) union() {
cylinder(r=1.0,h=1,center=false);
cube(size=[1,1,1],center=false);
}

//This is going to be the two a
{
rotate(45)
color("Blue")
translate([13.7,-13.7,26.667])cube([1, 27.65, 1], center = false);

angle=5;

```

```

color("GreenYellow")
multmatrix(m = [ [sin(angle), -cos(angle), 0, 20.5],
                 [cos(angle), sin(angle), 0, 39.5],
                 [0, 0, 1, 26.667],
                 [0, 0, 0, 1]
               ]) union() {
cylinder(r=1.0,h=1,center=false);
cube(size=[1,1,1],center=false);
}

//This is going to be the two b
{
rotate(45)
color("Blue")
translate([42,-13.7,26.667])cube([1, 27.65, 1], center = false);

angle=5;
color("GreenYellow")
multmatrix(m = [ [sin(angle), -cos(angle), 0, 0.7],
                 [cos(angle), sin(angle), 0, 19.5],
                 [0, 0, 1, 26.667],
                 [0, 0, 0, 1]
               ]) union() {
cylinder(r=1.0,h=1,center=false);
cube(size=[1,1,1],center=false);
}

//This is going to be the three a
{
rotate(45)

```

```

color("Red")
translate([14,-14,13.333])cube([27.65, 1, 1], center = false);

angle=5;
color("Black")
multmatrix(m = [ [cos(angle), -sin(angle), 0, 38.5],
                 [sin(angle), cos(angle), 0, 19.5],
                 [0, 0, 1, 13.333],
                 [0, 0, 0, 1]
               ]) union() {
cylinder(r=1.0,h=1,center=false);
cube(size=[1,1,1],center=false);
}
}

```

```

//This is going to be the three b
{
rotate(45)
color("Red")
translate([14,14,13.333])cube([27.65, 1, 1], center = false);

angle=5;
color("Black")
multmatrix(m = [ [cos(angle), -sin(angle), 0, 18.5],
                 [sin(angle), cos(angle), 0, 39],
                 [0, 0, 1, 13.333],
                 [0, 0, 0, 1]
               ]) union() {
cylinder(r=1.0,h=1,center=false);
cube(size=[1,1,1],center=false);
}
}

```

Appendix B

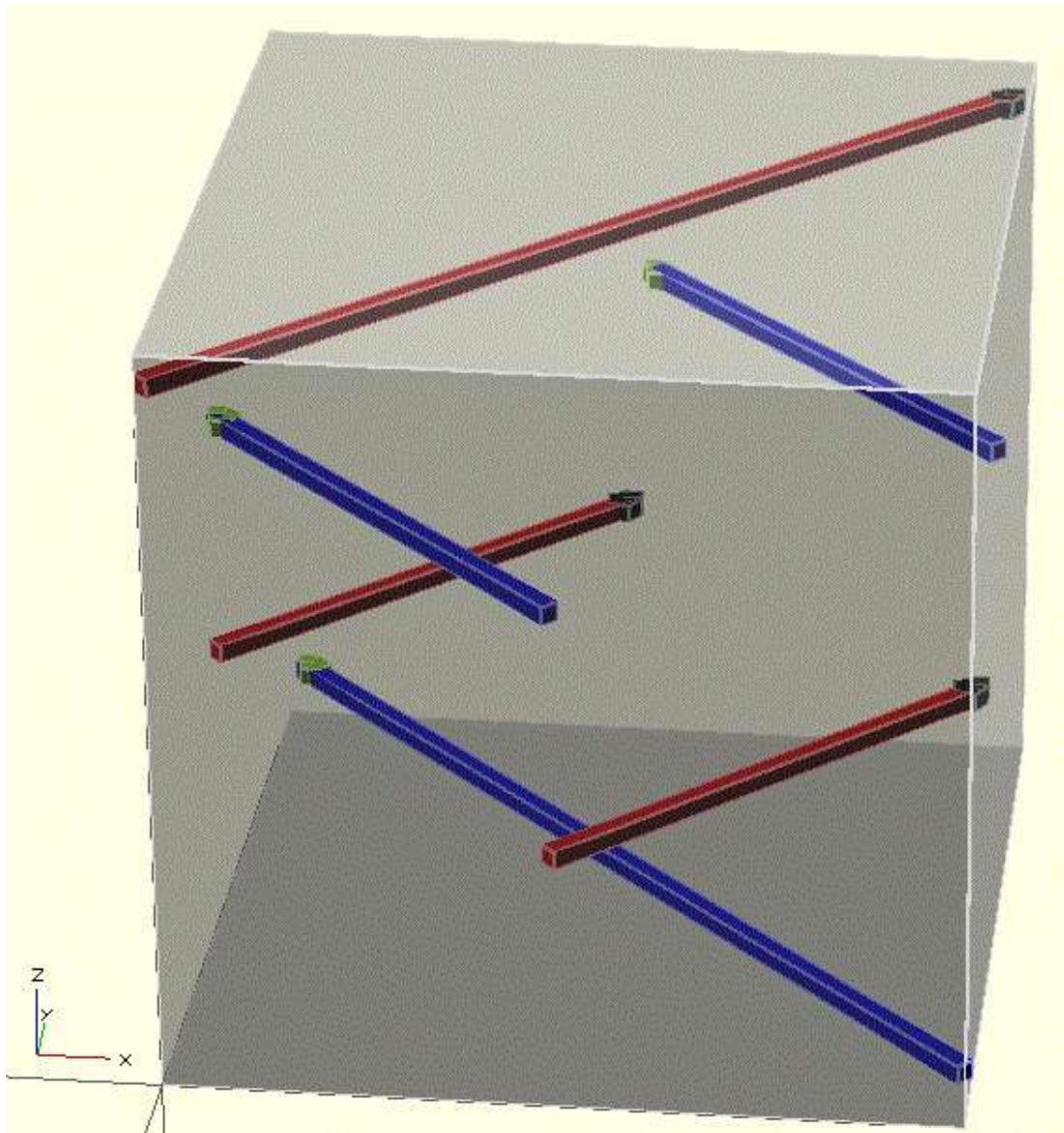


Figure 5. View from the back of the Yin/Yang arrows.

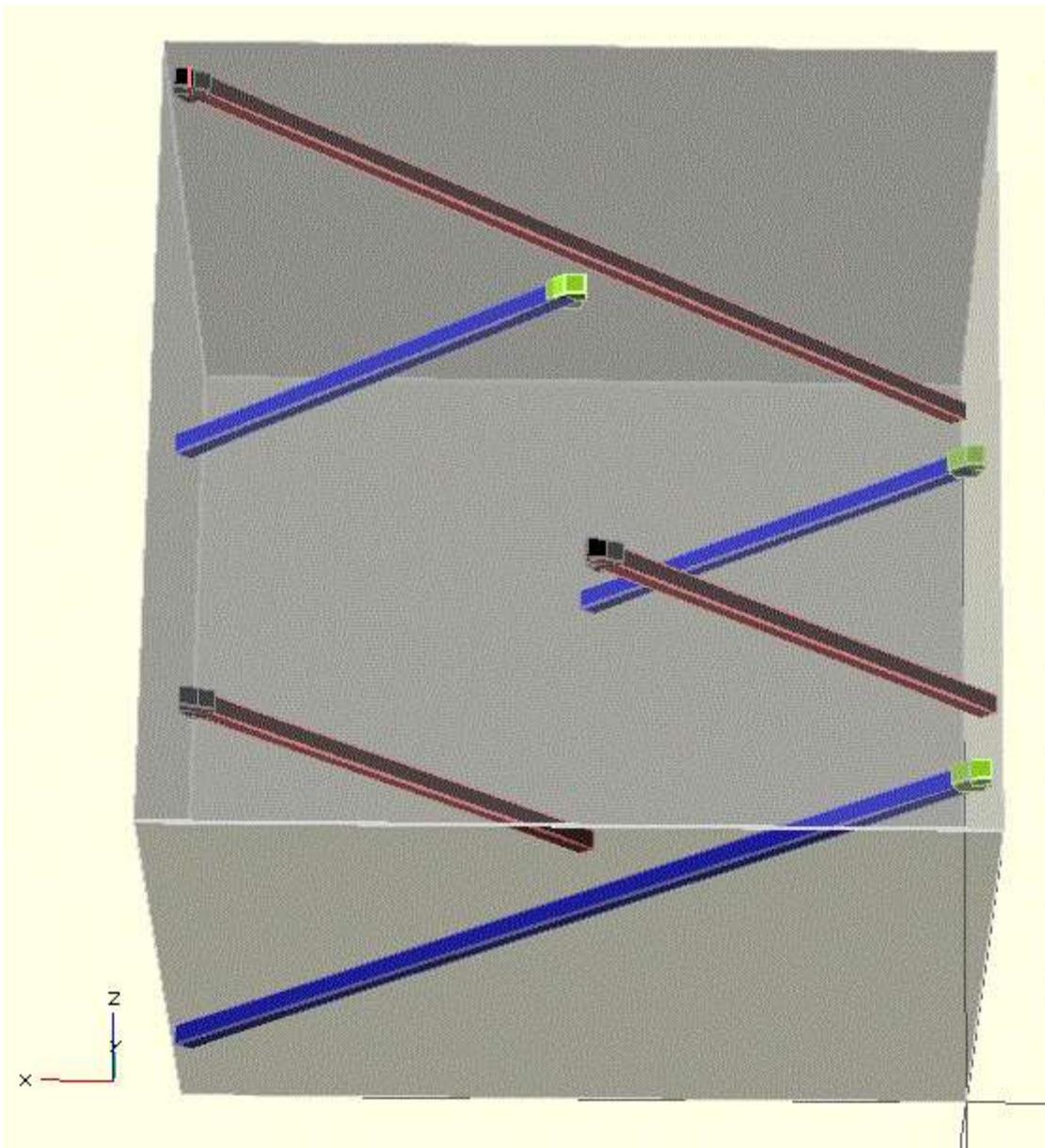


Figure 6. View from the front of the Yin/Yang arrows.

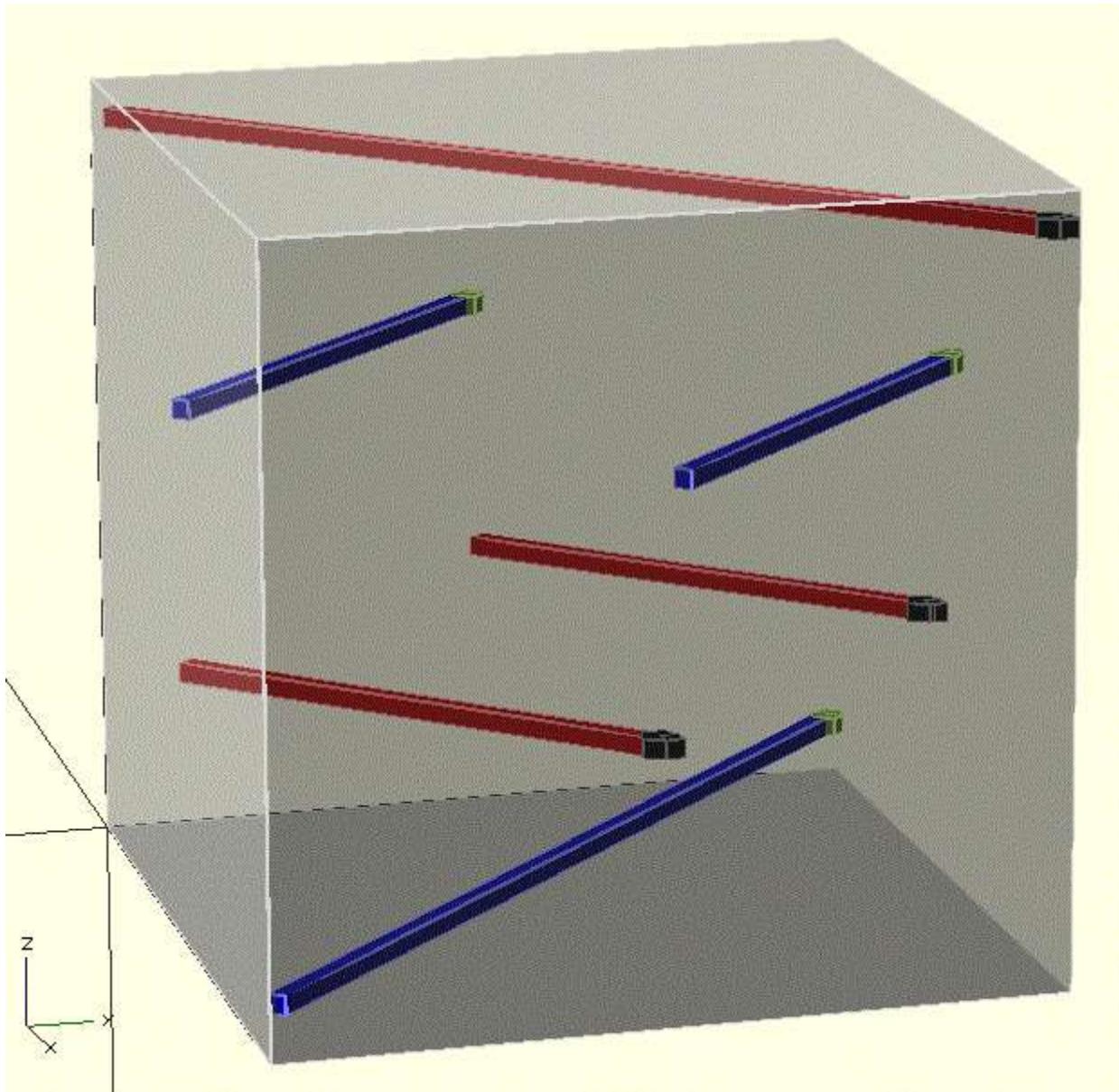


Figure 7. View from the left side of the Yin/Yang arrows.

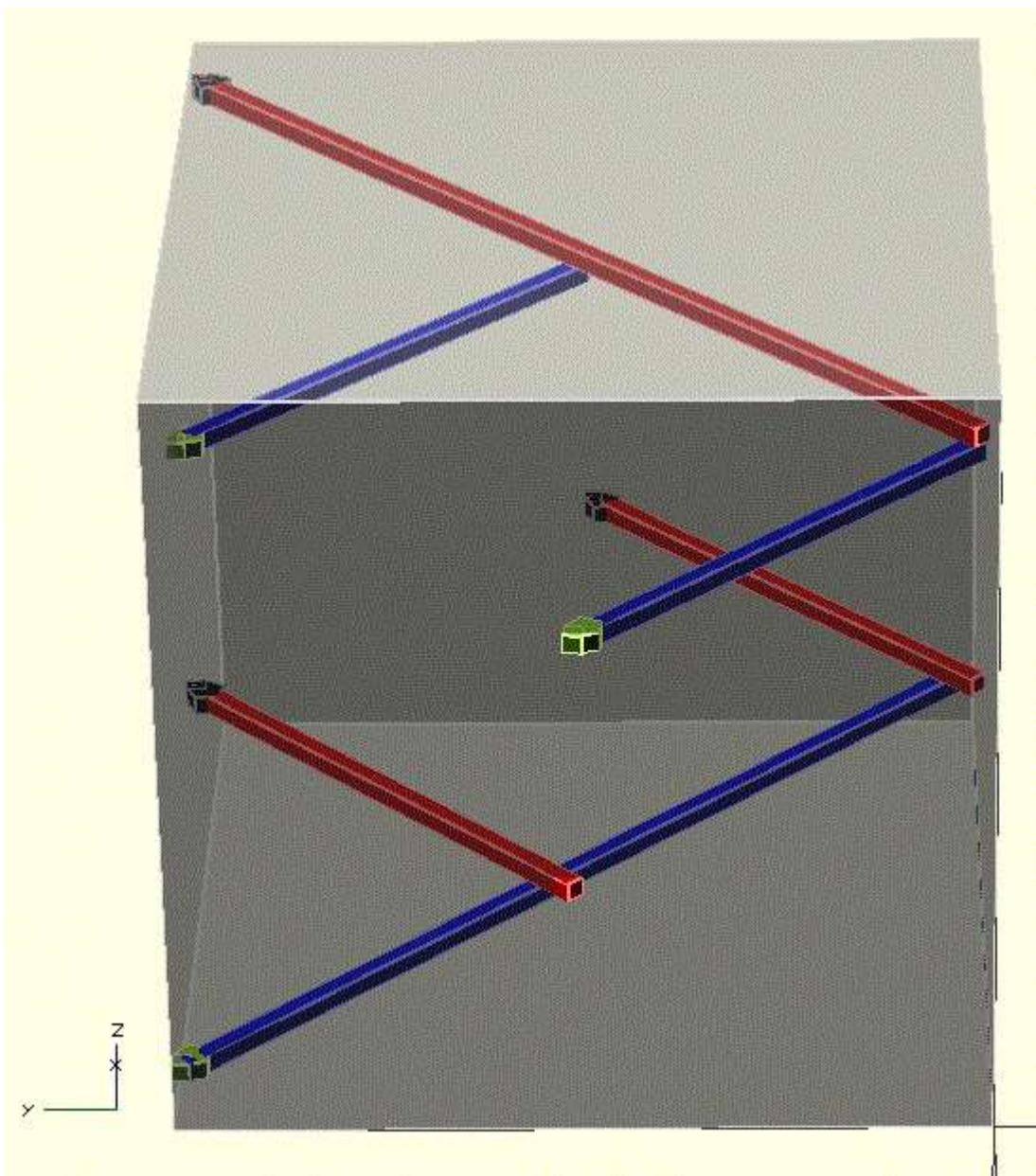


Figure 8. View from the right side of the Yin/Yang arrows.

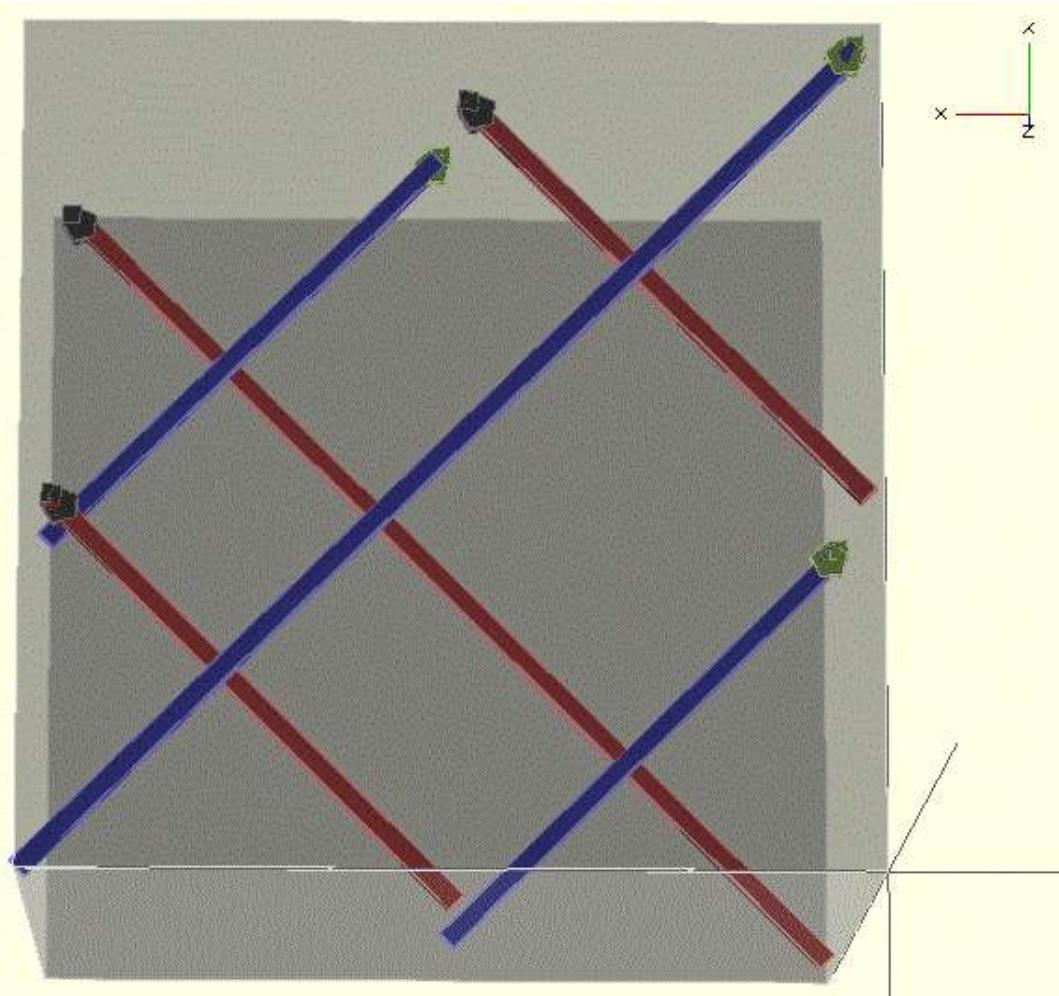


Figure 9. View from the bottom of the Yin/Yang arrows.

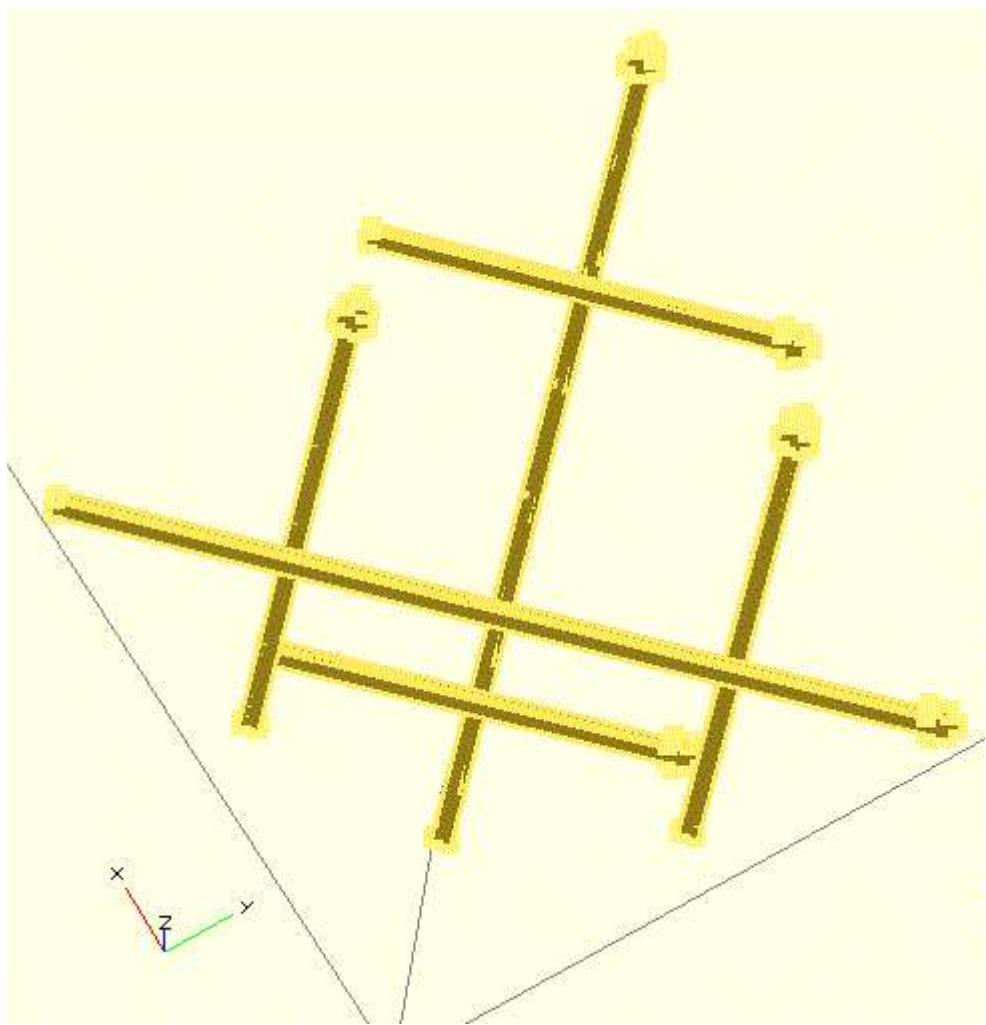


Figure 10. A compiled and rendered view of the 3-D Yin/Yang arrows as seen from the bottom of the resulting model as designed by OpenSCAD 2014.3.